Chronomatic-309 Dual Alarm AM/FM Stereo Clock Radio w/Cassette Recorder
(120-1609B) Features Faxback Doc. # 56944

Your Chronomatic-309 Dual Alarm AM/FM Stereo clock Radio with Cassette Recorder offers you all the features of a dual alarm clock, and AM/FM stereo radio, and a cassette player/recorder in one convenient package. You can record from the radio, or make live stereo recordings using the built-in microphone.

Its features include:

Dual Alarm	- lets you set two different alarm times.
Battery Backup with Battery Sentinel	- maintains clock and alarm operation for up to 8 hours if he power is interrupted, and indicates when you need to replace the backup battery.
Lighted Dial	- makes tuning easy, even in low lights.
Large Green LED Display	- makes the clock easy to read.
Dimmer	- lets you adjust the display's brightness.
Sleep Feature	- plays the radio or tape for up to 59 minutes before it automatically turns off.
Snooze Timer	- temporarily silences the buzzer, radio, or tape alarm so it sounds again in about 7 minutes.
One Button Record	- records with the press of a single button.
PHONES Jack	- lets you connect optional headphones with a 1/8-inch plug.
Full Auto-Stop	- saves battery power and reduces tape wear by turning off the motor and releasing the tape handling parts when the tape reaches its end.
Beat-Cut Switch	- reduces interference when you record from a live AM radio broadcast.
External Antenna Terminals	- lets you connect an external FM antenna for optimum reception.

CAUTION: To reduce the risk of electric shock, do not; remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

Note: The graphical symbols with supplemental markings are located on the bottom of the unit.

Connecting Power

Plug the Chronomatic-309's power cord into a standard AC outlet.

Installing the Backup Battery

To keep the clock running in the event of an AC power failure, install a 9-volt backup battery (not supplied). We recommend and alkaline battery, such as RadioShack Cat. No. 23-553. A fresh battery powers the clock for up to 8 hours, and sounds the alarm for up to 10 minutes if AC power fails.

Notes: Before you install the backup battery, plug in the AC power cord to prevent unnecessary drain on the battery.

Replace the battery when the BATTERY SENTINEL indicator on the right side of the display lights.

If the BATTERY SENTINEL indicator lights after a power failure, press ALARM 2 SET to turn it off. If the indicator lights again, or if it comes back on the next day, replace the backup battery.

If the display flashes after an AC power failure, replace the battery and reset the clock.

1. While pressing and holding the battery compartment cover's latch, pull up on the battery compartment cover to remove it.

2. Snap the battery into the terminals and place it in the compartment.

   CAUTION: Use only a fresh battery of the required size and type.

3. Replace the cover.

Adjusting the Display

Set DIMMER HI/LO on the back of the Chronomatic -309 to HI (high) or LO (low), depending on the amount of light in the room.

Connecting an External FM Antenna

You can connect an external FM antenna (not supplied) to the Chronomatic

309 for improved FM reception. Your local RadioShack store sells a complete line of external antennas.

Follow these steps to connect an external FM antenna to the Chronomatic 309.

1. Use a Phillips screwdriver to loosen both screws on the external antenna terminals.

2. Remove the internal FM antenna's spade lug from the external antenna terminal.

3. Slide both of the external antenna's spade lugs underneath the screw heads.

4. Retighten the screws.

Using Headphones

For private listening, you can connect a pair of headphones (not supplied) with a 1/8-inch plug to the Chronomatic-309. Your local RadioShack store has a wide selection of headphones.

Plug the headphones into the Chronomatic-309's PHONES jack.

Note: When you connect headphones, the internal speakers are automatically disconnected.

Listening Safely

To protect your hearing, follow these guidelines when you use headphones.

Set the volume to the lowest setting before you begin listening. After you begin listening, adjust the volume to a comfortable level.

Do not listen at extremely high volume levels. Extended high volume listening can lead to permanent hearing loss.

Once you set the volume, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

Clock Operation

Setting the Time

1. Press and hold down TIME SET.

2. While holding down TIME SET, repeatedly press FWD SLOW to advance the time in 1-minute increments, or press and hold down FWD FAST to rapidly advance the time.

   Note: The PM indicator lights when you set a PM hour.

3. Release TIME SET when the desired time appears on the display.

Using the alarms

The Chronomatic-309 has two alarms. You can set the alarms so the buzzer,

radio, or tape player turns on at the preset times.

Setting the Alarms

Follow these steps to set Alarm 1.

1. Press and hold down ALARM 1 SET.

2. While holding down ALARM 1 SET, repeatedly press FWD SLOW to advance the alarm time in 1-minutes increments, or press and hold down FWD FAST to rapidly advance the time.

   Note: the PM indicator lights when you set a PM hour.

3. Release ALARM 1 SET when the desired alarm time appears on the display.

To set Alarm 2, press and hold down ALARM 2 SET instead or ALARM 1 SET and press FWD SLOW or FWD FAST.

The set alarm time shows when you press and hold down ALARM 1 SET or ALARM 2 SET.

Turning the Alarms ON/OFF

To turn on an alarm

1. Set OFF/AUTO/ALARM 1 and OFF/AUTO/ALARM 2 as follows:

   ALARM - the buzzer sounds at the preset alarm time.

   AUTO - the radio sounds or the tape player plays at the preset alarm time.

   The ALARM 1 or 2 indicator lights when you set OFF/AUTO/ALARM 1 or OFF/AUTO/ALARM 2 to ALARM.

2. If you set OFF/AUTO/ALARM 1 or OFF/AUTO/ALARM 2 to AUTO, you must also set POWER on the right side of the Chronomatic-309 as follows:

   RADIO - the radio turns on at the preset alarm time.

   TAPE/RADIO/OFF - the tape plays at the preset alarm time.

Notes: If you select AUTO, adjust the volume to a level that will wake you. See "Playing the Radio," below.

If you set POWER to TAPE/RADIO OFF, you must also load a cassette in the compartment and press PLAY. See "Playing a Cassette Tape," below.

If you set the tape player to play for both alarms and the tape is not rewound, it begins playing from the point where the previous alarm stopped.

At the preset alarm time, the buzzer, radio, or tape player sounds for 59 minutes, then automatically turns off.

Note: The tape player automatically stops when the tape reaches the end, even if this is before 59 minutes pass.

To silence the alarm:

Buzzer - set OFF/AUTO/ALARM to OFF, then back to ALARM.

Radio - press RADIO OFF.

Tape Player - press RADIO OFF.

To turn off the alarm so it will not sound every 24 hours, set OFF/AUTO/ALARM to OFF.

Using the Snooze Feature

To temporarily silence the buzzer, radio, or tape player so it sounds again after 7 minutes, press SNOOZE.

Using the Sleep Timer

You can set he radio or the tape player to play for up to 59 minutes and then automatically turn off.

1. Set POWER to RADIO or TAPE/RADIO OFF.

2. Press RADIO ON.

3. If you set POWER to TAPE/RADIO OFF, load a cassette tape.

4. Set OFF/AUTO/ALARM for each alarm you want to use to AUTO.

5. To set the playing time for 59 minutes, press SLEEP once. The radio plays for 59 minutes, then it turns off.

To set the playing time for less than 59 minutes, press and hold down SLEEP. While holding down SLEEP, repeatedly press FWD FAST or FWD SLOW to set the desired playing time.

6. If you set POWER to TAPE/RADIO OFF, press PLAY. The cassette plays for the set time period then automatically turns off.

Note: If the cassette reaches the end, the Chronomatic-309 automatically stops playing and releases the tape-handling parts.

To manually stop the cassette, press STOP/EJECT.

Playing the Radio

1. Set POWER to RADIO.

2. Press RADIO ON to turn on the radio.

3. Set BAND to the desired band.

4. Rotate TUNING to the desired frequency.

Notes: The AM antenna is built in. Turn the Chronomatic-309 to improve AM reception. If you did not connect an external FM antenna to the radio, fully extend the power cord for the best FM reception. It serves as the FM antenna.

The FM STEREO indicator lights when you receive an FM station in stereo.

To improve reception for weak FM radio stations, set BAND to FM. The sound changes from stereo to monaural (mono), but the sound quality should improve.

5. Adjust BALANCE and VOLUME to the desired listening levels.

6. To turn off the radio, set POWER to TAPE/RADIO OFF, or press RADIO OFF.

Cassette Operation

Loading a Cassette Tape

1. Take up any slack in the tape by turning one of the cassette's hubs with a pencil. If you do not remove excess slack, the tape might

become tangled in the record/playback mechanism.

2. Press STOP/EJECT to open the cassette compartment door.

3. Load the cassette with its open edge up, the full reel to the right, and the side you want to play facing you.

4. Close the cassette compartment door.

Playing a Cassette Tape

Note: Set VOLUME to its lowest setting before you begin playing a cassette tape.

1. Set POWER to TAPE/RADIO OFF.

2. Load a cassette tape.

3. Press RADIO ON.

4. Press PLAY.

   Notes: Press PAUSE to temporarily stop playback. Press PAUSE again to resume playback.

   Press FAST-F or REWIND to rapidly wind the tape forward or backward. Press STOP/EJECT, then PLAY again to resume play.

5. Adjust BALANCE and VOLUME to the desired listening levels.

6. The cassette plays until it reaches the end of the side, then it automatically stops. To completely stop playback before it automatically stops, press STOP/EJECT. Press STOP/EJECT again to open the cassette compartment door and remove the cassette tape.

Recording

You can record from the radio or use the built-in microphone to make a live recording.

Notes: Before you load a cassette tape for recording, be sure its erase protection tabs are in place (see "Preventing Accidental Erasure," below).

The Chronomatic-309's Automatic Level Control (ALC) circuit automatically adjusts the recording level. VOLUME has no effect

on recording.

Recording from the Radio

1. Load a blank cassette tape or one you want to record over into the cassette compartment.

2. Set POWER to RADIO.

3. Set BAND to AM, FM, or FM STEREO.

4. Adjust TUNING to the station you want to record.

5. Press RECORD to begin recording. Both PLAY and RECORD lock down.

   CAUTION: Do not force down RECORD. This can damage the record mechanism.

   Note: You might hear a hum or whistling sound in the background of some AM radio recordings. Set BEAT CUT to the position that gives you the best recording quality.

6. Press STOP/EJECT to stop recording.

Timer Recording

Set Alarm 1 or 2 for the time you want to begin recording, then follow these steps to automatically record a program.

1. Set POWER to RADIO.

2. Set OFF/AUTO/ALARM for each alarm you want to use to AUTO.

3. Press RECORD. At the set time, the radio plays and the recorder begins recording. The radio plays for 59 minutes, then automatically stops when it reaches the end.

Making Live Recordings

Follow these steps to make live recordings using the built-in microphone on the right side of he Chronomatic-309.

1. Set POWER to TAPE/RADIO OFF.

2. Load a blank cassette tape or one you want to record over into the cassette compartment.

3. Press RADIO ON.

4. Place the Chronomatic-309 2 or 3 feet from the recording source.

5. Press RECORD to begin recording. Both PLAY and RECORD lock down.

   Note: To temporarily stop recording, press PAUSE. To resume recording, press PAUSE again.

6. Press STOP/EJECT to stop recording.

Tape Tips

Recommended Tapes

Tape quality greatly affects the quality of the recording. We recommend extended-range or low noise Type 1 regular length (60- or 90-minute) normal-bias cassette tapes. We do not recommend long-play cassette tapes such as C-120s because they are thin and easily tangle.

Erasing a Cassette Tape

To record over a cassette tape, simply record as usual. The cassette deck records over the previous recording.

To erase the entire cassette tape, set POWER to TAPE/RADIO OFF, then let the tape record to the end.

You can quickly erase both sides of a cassette tape using a bulk tape eraser such as Cat. No. 44-232, available at your local RadioShack store.

Preventing Accidental Erasure

Cassette tapes have two erase-protection tabs - one for each side. When a tab is in place, you can record on that side. To protect a recording from being accidentally recorded over or erased, use a screwdriver to remove one or both of the cassette tape's erase-protection tabs. This prevents RECORD from being pressed.

If you later decide to record on a tape side after you have removed the erase-protection tab for that side, place a piece of strong plastic tape over that side's erase-protection hole. Be sure you cover only the hole originally covered by the erase-protection tab.

CAUTION: Removing the erase-protection tabs does not prevent a bulk

eraser from erasing a cassette tape.

Restoring Tape Tension and Sound Quality

After you play a cassette tape several times, the tape might become tightly wound on the reels. This can cause playback sound quality to deteriorate.

To restore the sound quality, fast forward the tape from the beginning to the end of one side, then completely rewind it. Then loosen the tape reels by gently tapping each side of the cassette's outer shell on a flat surface.

CAUTION: Be careful not to damage the cassette when tapping it. Do not touch the exposed tape or allow any sharp objects near the cassette.

Chronomatic-309 Dual Alarm AM/FM Stereo Clock Radio w/Cassette Recorder
(120-1609B) Care and Maintenance Faxback Doc. # 56947

Your Chronomatic-309 Dual Alarm AM/FM Stereo Clock Radio with Cassette Recorder is an example of superior design and craftsmanship. The following suggestions will help you care for the Chronomatic-309 so you can enjoy it for years.

Keep the Chronomatic-309 dry. If it gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.

Use and store the Chronomatic-309 only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.

Handle the Chronomatic-309 gently and carefully. Dropping it can damage circuit boards and cases and can cause the Chronomatic-309 to work improperly.

Keep the Chronomatic-309 away from excessive dust and dirt, which can cause premature wear of parts.

Wipe the Chronomatic-309 with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the Chronomatic-309.

Use only a fresh battery of the recommended size and type. Always remove an old or weak battery, which can leak chemicals that destroy electronic circuits.

Modifying or tampering with the Chronomatic-309's internal components can cause a malfunction and might invalidate the Chronomatic-309's warranty and void your FCC authorization to operate it. If your Chronomatic-309 is not performing as it should, take it to your local RadioShack store for assistance.

FCC Information

Your radio might cause TV or radio interference even when it is operating properly. To determine whether your radio is causing the interference, turn off your radio. If the interference goes away, your radio is causing it. Try to eliminate the interference by:

Moving your radio away from the TV or other radio.

Contacting your local RadioShack store for help.

If you cannot eliminate the interference, the FCC requires that you stop using your radio.

Cleaning the Tape-Handling Parts

Dirt, dust, or particles of the tape's coating can accumulate on the tape heads and other parts that the tape touches. This can greatly reduce the cassette player's performance. To prevent noise and poor high-frequency response, clean the cassette player's tape-handling parts after every 20 hours of use.

1. Set POWER to TAPE/RADIO OFF.

2. Unplug the power cord and remove the backup battery.

3. Press STOP/EJECT to open the cassette compartment door.

4. While gently pressing and holding back the erase-protection tab sensor on the lower right side inside the cassette compartment, press RECORD to expose the tape-handling parts.

5. Use a cotton swab dipped in tape head cleaning solution or denatured alcohol to gently clean the capstan, pinch roller, tape guides, erase head, and tape heads.

Your local RadioShack store has a complete line of cassette deck cleaning supplies.

Chronomatic-309 Dual Alarm AM/FM Stereo Clock Radio w/Cassette Recorder
(120-1609B) Specifications Faxback Doc. # 56948

Radio:

Frequency Range (FM): ..... 88 - 108 MHz
(AM): ..... 530 - 1710 kHz

Cassette Player:

Tape Speed: ..... 1-7/8 ips

Erasing System: ..... Magnetic Erase

Recording System: ..... AC Bias

General:

Power Source: ..... AC 120V, 60 Hz, 10 W

Power Output: ..... 500 mW

Speakers: ..... 3-1/2 Inches, 8 Ohms Permanent Dynamic Type

Dimensions (HWD): ... 13-5/8 x 4-1/3 x 5-11/16 Inches (346 x 110 x 144 mm)

Weight: ..... 4 lbs. (1.8 kg)

Specifications are typical; individual units might vary. Specifications
Are subject to change and improvement without notice.

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